

**Amendments to the Specification:**

Please replace paragraph [0014] with the following amended paragraph:

Preferably, the porous stainless steel support is prepared by steps of mechanically polishing the support by one of an abrasive paper and an ultrasonic vibration, electro-polishing the support, acid-washing the support with 8~10 ~~N~~ M (molar) HCl, and activating the support at 40~60 °C.

Please replace paragraph [0049] with the following amended paragraph:

The porous stainless steel (PSS) support tube used in the present invention is commercially available and has an outer diameter of 9.575 to 25.4 mm (3/8 to 1 inch) and a length of 50 to 1500 mm (2 to 60 inch). The PSS support tube is connected with two pieces of standard stainless steel tubes of the same diameter at the two terminals of the PSS support tube by an orbital welding machine under argon atmosphere. Of the two standard stainless steel tubes, the shorter one (30 mm) has a sealed end while the longer one (50 mm) is open ended. This extended PSS support tube is mechanically polished with abrasive papers of #400, #800, #1000 and #1200 for 10 minutes each, or polished by an ultrasonic vibration, and then briefly electro-polished. The smoothed PSS support is cleaned with ~~40N~~ 10 M (molar) hydrochloric acid (HCl) for 5 minutes followed with water for 3 minutes in an ultrasonic bath at room temperature. This clean step is repeated three more times. After rinsing with distilled water, the PSS support is further cleaned with organic solvents in the following order of acetone, toluene, methyl tert-butyl ether (MTBE) and acetone for 15 minutes each in the ultrasonic bath. Thereafter, the cleaned PSS support is air-dried. The PSS support is either electroless plated with palladium salt solution after activation or is filled with hydrogen permeable fine metal powders, such as palladium, niobium or tantalum mixed with the palladium paste or high temperature epoxy resin, to fill up the pore cavities on the surface. The PSS support is then lightly polished with an abrasive paper of #1800 to smooth out the surface and to expose the metal layer for the membrane deposition onto it.

Please replace paragraph [0052] with the following amended paragraph:

3. Acid washing at room temperature: The PSS support is acid-washed with 10 ~~N~~ M (molar) HCl in an ultrasonic bath for 5 minutes at room temperature followed with water for 3 minutes. The above step is repeated two more times.